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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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09/485,956    06/16/00    ERICK

J	10683/402
EXAMINER	

PM82/0221

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717 N HARWOOD  
SUITE 3400  
DALLAS TX 75201-6507

TRAN, D	PAPER
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DATE MAILED:    02/21/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

*Tan Nguyen*  
TAN NGUYEN  
PRIMARY EXAMINER

**Office Action Summary**

Application No.

09/485,956

Applicant(s)

ERICK, JACK M.

Examiner

DALENA TRAN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9-16, and 21-13 is/are rejected.
- 7) ☒ Claim(s) 7-8, and 17-20 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 18) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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## **DETAILED ACTION**

### **Notice to Applicant(s)**

1. This office action is responsive to the amendment filed on 12/12/00. As per request, claims 11 and 23 have been amended. Thus, claims 1-23 are pending.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1,3,10-11,13-14, and 22-23, as understood by examiner, are rejected under 35 U.S.C.103(a) as being unpatentable over Kull et al. (5,740,547) in view of Shirkey et al. (5,554,982).

As per claims 1,11, and 23, Kull et al. disclose a train collision avoidance system, comprising: a data base storing train grade crossing data (see the abstract; and column 1, lines 50-65). Kull et al. do not mention a receive of GPS vehicle location data identify a location of a vehicle, and use GPS vehicle location data and train grade crossing data to determine if the vehicle is within a predefined distance from a grade crossing. However, Shirkey et al. mention that (see the abstract); and provide a sensory indication when the vehicle is within the predefined distance from a grade crossing (see columns 1-2, lines 66-5). It would have been obvious to one

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of ordinary skill in the art at the time the invention was made to modify the teach of Kull et al. by mention a receive of GPS vehicle location data identify a location of a vehicle, and use GPS vehicle location data and train grade crossing data to determine if the vehicle is within a predefined distance from a grade crossing and provide a sensory indication to provide a proximity alert system to prevent a collision.

Also as per claim 3, Shirkey et al. mention compare the vehicle direction of travel data with direction data in data base to determine if vehicle is within the predefined distance and provide a sensory indication (see column 3, lines 40-61).

As per claims 10 and 14, Shirkey et al. also mention to receive vehicle data and to change predefined distance as a function of the vehicle speed data (see column 2, lines 6-26; and columns 3-4, lines 62-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kull et al. by mention to receive vehicle data and to change predefined distance as a function of the vehicle speed data to accurately determine vehicle position toward a grade crossing and provide a warning signal to prevent collision.

Also as per claim 13, Shirkey et al. mention a transmit signal from a train to detect a proximity thereof to the vehicle (see column 4, lines 19-44).

Claim 22 is method claim corresponding to system claims 1,11, and 23 above. Therefore, it is reject for the same rationales set forth as above.

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4. Claims 6,9, and 15-16, as understood by examiner, are rejected under 35 U.S.C.103(a) as being unpatentable over Kull et al. (5,740,547), and Shirkey et al. (5,554,982) as applied to claims 1 and 11 above; and further in view of Gerszberg et al. (5,864,304).

As per claims 6 and 9, Kull et al., and Shirkey et al. do not mention to provide a radius of protection around the vehicle. However, Gerszberg et al. mention to provide a radius of protection around the vehicle and radius defined by predefined distance (see column 2, lines 2-26; and column 4, lines 35-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kull et al., and Shirkey et al. by mention to provide a radius of protection around the vehicle and radius defined by predefined distance to ensure the danger area that should be warning for a vehicle.

Also as per claims 15 and 16, Gerszberg et al. mention to provide an alert sensory indication for a vehicle (see columns 3-4, lines 58-34).

5. Claims 2,4-5, and 21, as understood by examiner, are rejected under 35 U.S.C.103(a) as being unpatentable over Kull et al. (5,740,547), and Shirkey et al. (5,554,982) as applied to claims 1 and 11 above, and further in view of Hopkins (3,758,775).

As per claim 2, Kull et al., and Shirkey et al. do not mention direction data identify a direction of a road that intersects a railroad track at the grade crossing. However, Hopkins mention that (see columns 3-4, lines 42-5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kull et al., and Shirkey et al. by

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mention direction data identify a direction of a road that intersects a railroad track at the grade crossing to accurately determine the presence or absence of a train from a remote location.

Also as per claims 4,5, and 21, Hopkins mention there is association therewith direction data of at least one road that intersects a railroad track at a grade crossing identified by the train grade crossing data (see column 5, lines 28-62).

6. Claim 12, as understood by examiner, are rejected under 35 U.S.C.103(a) as being unpatentable over Kull et al. (5,740,547), and Shirkey et al. (5,554,982) as applied to claims 1 and 11 above, and further in view of Welk (5,699,986).

As per claim 12, Kull et al., and Shirkey et al. do not clearly mention GPS signals provide latitude and longitude parameters of geographical locations of the vehicle. However, Welk mention that (see columns 3-4, lines 49-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teach of Kull et al., and Shirkey et al. by mention GPS signals provide latitude and longitude parameters of geographical locations of the vehicle to detect the proximity of vehicle according to the grade crossing.

7. Claims 7,8, and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Remarks**

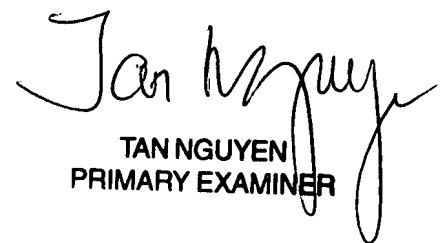
8. Applicant's argument files on 12/12/00 have been fully considered and they are deemed to be persuasive. However, upon updated search and the amended claims, the new ground of rejection has been set forth as above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalena Tran whose telephone number is (703)308-8223. The examiner can normally be reached on Monday-Friday from 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Cuchlinski, can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1113.

/dt  
February 15, 2001

  
TAN NGUYEN  
PRIMARY EXAMINER